

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

Claims 1-8 (Cancelled)

9. **(Original)** A method for treating a thrombotic condition in a mammal, said method comprising administering to said mammal a pharmacologically acceptable dose of a modified low molecular weight heparin (MLMWH) compound having a molecular weight of about 5,000 Daltons to about 9,000 Daltons.

10. **(Original)** The method in accordance with claim 9, wherein said MLMWH compound (1) inhibits fibrin-bound thrombin and fluid-phase thrombin by catalyzing antithrombin, and (2) thrombin generation by catalyzing factor Xa inactivation by antithrombin.

11. **(Original)** The method in accordance with claim 9, wherein said MLMWH compound has an anti-factor IIa activity of about 40 U/mg to about 100 U/mg, and an anti-factor Xa activity of about 90 U/mg to about 150 U/mg.

12. **(Original)** The method in accordance with claim 11, wherein said MLMWH compound has an anti-factor Ha activity of about 60 U/mg to about 75 U/mg, and an anti-factor Xa activity of

about 100 U/mg to about 125 U/mg.

13. **(Original)** The method in accordance with claim 12, wherein said MLMWH compound has an anti-factor IIa activity of about 65 U/mg, and an anti-factor Xa activity of about 115 U/mg.

14. **(Original)** The method in accordance with claim 9, wherein said MLMWH compound has a molecular weight of about 5,400 Daltons to about 8,000 Daltons.

15. **(Original)** The method in accordance with claim 9, wherein said MLMWH, wherein said MLMWH compound has a molecular weight of about 5,800 Daltons to about 7,000 Daltons.

16. **(Original)** The method in accordance with claim 9, wherein said MLMWH compound has a molecular weight of about 6,000 Daltons.

17. **(Original)** The method in accordance with claim 9, wherein said thrombotic condition is arterial thrombosis.

18. **(Original)** The method in accordance with claim 9, wherein said thrombotic condition is coronary artery thrombosis.

19. **(Original)** The method in accordance with claim 9, wherein said thrombotic condition is venous thrombosis.
20. **(Original)** The method in accordance with claim 9, wherein said thrombotic condition is pulmonary embolism.
21. **(Original)** The method in accordance with claim 9, wherein said MLMWH compound is administered by injection.
22. **(Original)** A method of preventing the formation of a thrombus in a mammal at risk of developing thrombosis, said method comprising administering to said mammal a pharmacologically acceptable dose of a modified low molecular weight heparin (MLMWH) compound having a molecular weight of about 5,000 Daltons to about 9,000 Daltons.
23. **(Original)** The method in accordance with claim 22, wherein said MLMWH compound (1) inhibits fibrin-bound thrombin and fluid-phase thrombin by catalyzing antithrombin, and (2) thrombin generation by catalyzing factor Xa inactivation by antithrombin.
24. **(Original)** The method in accordance with claim 22, wherein said MLMWH compound has an anti-factor Ha activity of about 40 U/mg to about 100 U/mg, and an anti-factor Xa activity of about 90 U/mg to about 150 U/mg.

25. **(Original)** The method in accordance with claim 24, wherein said MLMWH compound has an anti-factor Ha activity of about 60 U/mg to about 75 U/mg, and an anti-factor Xa activity of about 100 U/mg to about 125 U/mg.

26. **(Original)** The method in accordance with claim 25, wherein said MLMWH compound has an anti-factor h a activity of about 65 U/mg, and an anti-factor Xa activity of about 115 U/mg.

27. **(Original)** The method in accordance with claim 22, wherein said MLMWH compound has a molecular weight of about 5,400 Daltons to about 8,000 Daltons.

28. **(Original)** The method in accordance with claim 22, wherein said MLMWH, wherein said MLMWH compound has a molecular weight of about 5,800 Daltons to about 7,000 Daltons.

29. **(Original)** The method in accordance with claim 22, wherein said MLMWH compound has a molecular weight of about 6,000 Daltons.

30. **(Original)** The method in accordance with claim 22, wherein said mammal is at increased risk of developing a thrombus due to a medical condition which disrupts hemostasis.

31. **(Original)** The method in accordance with claim 30, wherein said medical condition is

coronary artery disease.

32. **(Original)** The method in accordance with claim 30, wherein said medical condition is atherosclerosis.

33. **(Original)** The method in accordance with claim 22, wherein said mammal is at increased risk of developing a thrombus due to a medical procedure.

34. **(Original)** The method in accordance with claim 33, wherein said medical procedure is cardiac surgery.

35. **(Original)** The method in accordance with claim 34, wherein said medical procedure is cardiopulmonary bypass.

36. **(Original)** The method in accordance with claim 33, wherein said medical procedure is catheterization.

37. **(Original)** The method in accordance with claim 36, wherein said catheterization is cardiac catheterization.

38. **(Original)** The method in accordance with claim 33, wherein said medical procedure is atherectomy.

39. **(Original)** A method for inhibiting thrombus formation in a patient, said method comprising the step of administering to the patient a pharmacologically acceptable dose of a modified low molecular weight heparin (MLMWH) compound having a molecular weight of about 5,000 Daltons to about 9,000 Daltons.

40. **(Original)** The method in accordance with claim 39, wherein said MLMWH compound (1) inhibits fibrin-bound thrombin and fluid-phase thrombin by catalyzing antithrombin, and (2) thrombin generation by catalyzing factor Xa inactivation by antithrombin.

41. **(Original)** A method for inhibiting fibrin-bound thrombin and thrombin generation in a mammal, said method comprising administering to said mammal a pharmacologically acceptable dose of a modified low molecular weight heparin (MLMWH) compound having a molecular weight of about 5,000 Daltons to about 9,000 Daltons.

Claims 42-45 (**Cancelled**)

46. **(Previously Presented)** A method for treating a thrombotic condition in a mammal comprising administering a pharmacologically acceptable dose of a purified preparation of claim 43.

47. **(Previously Presented)** A method of preventing the formation of a thrombus in a mammal at risk of developing thrombosis comprising administering to the mammal a pharmacologically acceptable dose of a purified preparation of claim 43.

48. **(Previously Presented)** A method for inhibiting fibrin-bound thrombin and thrombin generation in a mammal comprising administering to the mammal a pharmacologically acceptable dose of a purified preparation of claim 43.

Claim 49 **(Cancelled)**

50. **(New)** A method for treating a thrombotic condition in a mammal, said method comprising administering to said mammal a pharmacologically acceptable dose of a low molecular weight heparin (LMWH) compound having a molecular weight of about 5,000 Daltons to about 9,000 Daltons.

51. **(New)** The method in accordance with claim 50, wherein said LMWH compound (1) inhibits fibrin-bound thrombin and fluid-phase thrombin by catalyzing antithrombin, and (2) thrombin generation by catalyzing factor Xa inactivation by antithrombin.

52. **(New)** The method in accordance with claim 50, wherein said LMWH compound has an anti-factor IIa activity of about 40 U/mg to about 100 U/mg, and an anti-factor Xa activity of about

90 U/mg to about 150 U/mg.

53. (New) The method in accordance with claim 52, wherein said LMWH compound has an anti-factor Ha activity of about 60 U/mg to about 75 U/mg, and an anti-factor Xa activity of about 100 U/mg to about 125 U/mg.

54. (New) The method in accordance with claim 53, wherein said LMWH compound has an anti-factor IIa activity of about 65 U/mg, and an anti-factor Xa activity of about 115 U/mg.

55. (New) The method in accordance with claim 50, wherein said LMWH compound has a molecular weight of about 5,400 Daltons to about 8,000 Daltons.

56. (New) The method in accordance with claim 50, wherein said LMWH, wherein said MLMWH compound has a molecular weight of about 5,800 Daltons to about 7,000 Daltons.

57. (New) The method in accordance with claim 50, wherein said LMWH compound has a molecular weight of about 6,000 Daltons.

58. (New) The method in accordance with claim 50, wherein said thrombotic condition is arterial thrombosis.

59. (New) The method in accordance with claim 50, wherein said thrombotic condition is coronary artery thrombosis.

60. (New) The method in accordance with claim 50, wherein said thrombotic condition is venous thrombosis.

61. (New) The method in accordance with claim 50, wherein said thrombotic condition is pulmonary embolism.

62. (New) A method for inhibiting thrombus formation in a patient, said method comprising the step of administering to the patient a pharmacologically acceptable dose of a low molecular weight heparin (LMWH) compound having a molecular weight of about 5,000 Daltons to about 9,000 Daltons.